

WHAT IS CLAIMED IS:

1. A method for resource management of a call control processor, the method comprising:

allocating resources in response to an origination call or a page response call of a terminal in a mobile communication system; and

sending a request again for allocation of available resources to the resource management processor within a predetermined time period, even if a resource management processor fails to allocate resources upon receiving the request for resource allocation.

2. The method according to claim 1, further comprising:

(a) sending a request for resource allocation at the call control processor to a resource management processor;

(b) if resource allocation is denied, transmitting resource allocation failure message at the resource management processor to the call control processor;

(c) if the call control processor receives resource allocation failure message, checking at the call control processor whether any other call has been released or whether any other processor has returned to a normal state from an abnormal state within the predetermined time; and

(d) if it is determined from process (c) that any call has been released or that any processor has returned to the normal state from the abnormal state within certain time, sending a request for re-allocation of available resources at the call control processor to the resource management processor.

3. The method according to claim 2, wherein, if the allocation of resources in response to the available resource re-allocation request made by the call control processor in process (d) is denied, said processes (b) through (d) are conducted repeatedly.

4. The method according to claim 3, wherein the number of repetitions of process (b) through (d) is limited to a predetermined number.

5. The method according to claim 1, wherein said pre-determined time period is the time allocated for waiting from the terminal's receipt of the base station's response message regarding the call connection request made by the terminal until the requested call is connected.

6. The method according to claim 1, wherein the resource management processor is at least one of a service data unit (SDU) management processor managing service data units (SDUs), a network control processor managing network resources, and a base station processor managing channels.

7. The method according to claim 2, wherein said other processor of said processes (c) or (d) comprises a processor state block indicating a state of the relevant processor.

8. The method for resource management of a call control processor according to claim 7, wherein said other processor is at least one of a service data unit (SDU) management processor managing service data units (SDUs), a network control processor managing network resources, and a base station processor managing channels.

9. The method according to claim 7, wherein in said process (c) the call control processor checks whether any other processor has returned to the normal state from the abnormal state by checking the processor state blocks of the other processors.

10. The method according to claim 2, wherein in said process (c) if any other processor returns to the normal state from the abnormal state:

said other processor notifies the call control processor of the return to the normal state; and

the call control processor checks whether said other processor has returned to the normal state from the abnormal state through the other processor's notification of the event occurrence.

11. The method according to claim 2, wherein in said process (c) the call control processor checks a base station manager (BSM) that manages the base station controller of the mobile communication system, thereby checking whether any other processor has returned to the normal state from the abnormal state.

12. The method according to claim 2, wherein in said process (c) if any other processor returns to the normal state from the abnormal state:

notifying, the call control processor of the occurrence of the return to the normal state, by the base station manager; and

checking whether said other processor has returned to the normal state from the abnormal state through the base station manager's notification of the event occurrence.

13. The method of claim 1, wherein the terminal is a mobile hand station.

14. A mobile communication system comprising:

a call control processor configured to send a request for resource allocation to a resource management processor,

wherein the call control processor is configured to check whether any other call has been released or whether any other processor has returned to the normal state from the abnormal state within predetermined time period, if the call control processor receives a resource allocation failure message from the resource management processor, and

wherein the call control processor is configured to send a request for re-allocation of available resources to the resource management processor, if it is determined that any other call has been released or that any other processor has returned to the normal state from the abnormal state.

15. The mobile communication system according to claim 14, wherein the call control processor is in a base station controller.

16. The mobile communication system according to claim 14, wherein the resource management processor is at least one of a service data unit (SDU) management processor managing service data units (SDUs), a network control processor managing network resources, and a base station processor managing channels.

17. The mobile communication system according to claim 14, wherein said other processor comprises a processor state block indicating the state of the relevant processor.

18. The mobile communication system according to claim 17, wherein said other processor is at least one of a service data unit (SDU) management processor managing service data units (SDU), a network control processor managing network resources, and a base station processor managing channels.

19. The mobile communication system according to claim 17, wherein the call control processor is configured to check whether any other processor has returned to the normal state from the abnormal state by checking the processor state blocks of the other processors.

20. The mobile communication system according to claim 14, wherein if any other processor returns to the normal state from the abnormal state:

said other processor is configured to notify the call control processor of occurrence of the return to normal state; and

the call control processor is configured to check whether said other processor has returned to the normal state from the abnormal state through the other processor's notification of the return to normal state.

21. The mobile communication system according to claim 15, wherein:

the mobile communication system further comprises a base station manager configured to manage the base station controller, and

the call control processor is configured to check whether said other processor has returned to the normal state from the abnormal state by checking the base station manager.

22. The mobile communication system according to claim 14, wherein if any other processor returns to the normal state from the abnormal state:

the base station manager is configured to notify the call control processor of the occurrence of the return to normal state; and

the call control processor is configured to check whether said other processor has returned to the normal state from the abnormal state through the base station manager's notification of the return to the normal state.

23. The mobile communication system according to claim 14, wherein the mobile communication system comprises:

at least one mobile hand station;

at least one base station;

at least one base station controller; and

at least one mobile switching center (MSC).

24. A method for resource management comprising:

receiving a request for resource allocation from a terminal;

requesting resource allocation;

monitoring resource availability during a predetermined connection time; and

notifying the terminal of resource allocation failure after the predetermined connection time, a resource is unavailable within the predetermined connection time.

25. The method of claim 24, wherein monitoring resource availability comprises:
transmitting a resource allocation failure message to a call control processor, if resource allocation fails; and
determining whether at least one resource becomes available during the predetermined connection time.

26. The method of claim 25, wherein monitoring resource availability further comprises
notifying the call control processor of resource availability, if the requested resource becomes available within the predetermined connection time;
repeating the request for resource allocation by the call control processor; and
allocating the requested resource and connecting to the terminal.

27. The method of claim 24, wherein the resource allocation is provided by at least one of a service data unit (SDU) management processor managing service data units (SDUs), a network control processor managing network resources, and a base station processor managing channels.

28. The method of claim 24, further comprising:
allocating the requested resource, if the requested resource becomes available within the predetermined connection time; and

connecting the terminal, without sending a resource allocation failure message to the terminal even if an initial resource request resulted in a failure.

29. The method of claim 24, wherein the terminal is at least one of a mobile terminal, PDA, and mobile hand station.

30. The method of claim 25, wherein the call control processor is integrated into a base station.